

**REGIONAL GOVERNMENT SERVICES PROJECT SCHEDULE  
for  
DEVELOPMENT OF A DRAFT PROPOSED MIXING ZONE POLICY  
and  
TECHNICAL SUPPORT DOCUMENT  
for the  
NORTH COAST REGIONAL WATER QUALITY CONTROL BOARD**

**January 13, 2005**

**Introduction**

The recently promulgated federal California Toxics Rule (CTR) established water quality criteria for the protection of aquatic life and human health for the surface waters of the State. In addition, the State Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California (SIP), adopted by the State Water Resources Control Board (State Water Board) in March 2000, established a procedure to ensure that CTR criteria are attained. The water quality objectives described in the CTR and SIP are new criteria that must be implemented by dischargers of wastewater to receiving waters. The criteria may, under some circumstances and for some constituents, be infeasible to achieve, despite the use of advanced wastewater treatment and pollution control technology. Where dischargers demonstrate to the North Coast Regional Water Quality Control Board (Regional Water Board) that effluent limitations set forth in the CTR and SIP are not reasonably possible to achieve, the SIP includes a provision for the Regional Water Board to consider use of a mixing zone in a receiving water on a discharge-by-discharge basis.

Publicly owned wastewater treatment works (POTWs) and industrial facilities operate under National Pollutant Discharge Elimination System (NPDES) permits that set forth the standards for treatment and discharge. The Regional Water Board reviews, updates and renews the permits once every five years. Concerned about the implementation of the objectives in the CTR and SIP when their NPDES permits are due for renewal, a consortium of dischargers in the Russian River watershed that includes the City of Ukiah, the City of Healdsburg, the City of Santa Rosa, the Town of Windsor, and the Sonoma County Water Agency (agreement permittees), through an agreement with Regional Government Services (RGS), has provided funding to hire RGS staff to assist the Regional Water Board in the development of a draft proposed mixing zone policy for the purposes of implementing the CTR and SIP. Catherine Kuhlman, Executive Officer of the Regional Water Board, and Richard Averett, Executive Director of Regional Government Services signed the Letter of Understanding between Regional Government Services and the North Coast Regional Water Quality Control Board on August 16, 2004. Soon thereafter, Ben Kor was selected as Project Manager and Theresa Wistrom and Alydda Mangelsdorf were selected as Project Leads, thus comprising the RGS staff for the work effort. For the purposes here, this group of three will be referred to as the RGS staff.

The RGS staff has evaluated the contents of the CTR, SIP, the Regional Water Quality Control Plan for the North Coast Region (Basin Plan), and applicable federal Environmental Protection Agency (EPA) water quality standards guidance as the basis for the development of this project schedule. This evaluation has been augmented by a cursory review of Basin Plans for other regions and the case of a permit renewal for the City of Yuba City that was remanded to the Central Valley Regional Water Quality Control Board by the State Water Board so as to reconsider a mixing zone for acute toxicity. As a result of this preliminary evaluation, RGS staff proposes to develop a draft Mixing Zone Policy as a Basin Plan Amendment for consideration by the Regional Water Board. A Technical Support Document (TSD) specific to the implementation of mixing zones in the North Coast Region would also be drafted. Adoption of a Mixing Zone Policy consistent with the current SIP would also require updating specific Regional Water Board Basin Plan water quality objectives currently in effect. RGS staff has consulted legal counsel for the Regional Water Board who has concurred with this proposal.

The draft mixing zone policy would reflect the Regional Water Board's current Basin Plan policy of requiring high levels of wastewater treatment or prohibiting waste discharges into the generally pristine waters of the North Coast Region, which support a broad range of beneficial uses. The draft TSD would contain all the information necessary to develop NPDES permit criteria, and (1) would be consistent with the State Water Board's SIP, (2) would be the most expeditious means of providing guidance to the agreement permittees, and (3) would provide Regional Water Board staff with regulatory information required for upcoming renewals of NPDES permits.

Unless the Regional Water Board modifies its current Basin Plan, mixing zones cannot be considered in those waters of the North Coast Region where all discharges to inland waters are currently prohibited. This prohibition of waste discharge applies to the Klamath River Basin and to all inland waters in the North Coastal Basin except for the Mad, the Eel, and the Russian rivers and their tributaries. Therefore, it is the intent of RGS staff to direct its primary attention to point source discharges in the Russian River watershed and secondarily, to consider point source discharges in the Mad and Eel River basins.

### **Reporting and Outreach**

RGS staff has organized tasks into quarterly commitments. At the end of each quarter, RGS staff will generate a brief report describing the progress to date and submit it to RGS, the permittees, other interested stakeholders, and Regional Water Board staff. (This project schedule is intended to constitute the progress report for the First Quarter ending November 30, 2004.) At appropriate times, including those cited in the project schedule below, RGS staff will request technical and historical information and monitoring data from the agreement permittees. In addition, RGS staff will periodically develop the information necessary for Regional Water Board staff to update the Regional Water Board on the progress of this project. At a point when it has been concluded that

the Mixing Zone Policy should be proposed as a Basin Plan Amendment, RGS staff will develop a stakeholder list and a schedule for conducting outreach, including public meetings.

The project schedule below may be modified as necessary to assure complete and expeditious implementation.

### **Project Schedule**

#### **First Quarter ending November 30, 2004**

##### **Project Planning**

- Assemble RGS staff -- completed October 5, 2004.
- Review Federal and State regulations and guidance relevant to the development of mixing zones -- completed October 15, 2004.
- Prepare a project schedule.
- Meet with Regional Water Board Executive Officer and staff to review project schedule and confirm approach -- meeting conducted on November 5, 2004.
- Meet with Regional Water Board Executive Officer, Regional Water Board staff, and representatives of agreement permittees to verify or modify the project schedule -- meeting conducted on November 9, 2004.
- Distribute project schedule to RGS, agreement permittees, and Regional Water Board staff -- scheduled for November 19, 2004.
- Review the contents of the CTR, SIP, the Basin Plan, and applicable federal Environmental Protection Agency (EPA) water quality standards guidance -- completed November 11, 2004.
- Develop informational report for Regional Water Board staff to update the Regional Water Board at its meeting on January 25 or 26, 2005 --completed December 9, 2004

#### **Second Quarter commencing December 1, 2004, and ending February 28, 2005**

##### **Preliminary TSD Research**

- Identify all existing and potential NPDES dischargers that may apply for a permit to discharge using a mixing zone. Map the discharge location of each and prioritize with respect to their discharge location, permit renewal date and other criteria as appropriate.
- Request from the agreement permittees a Reasonable Potential Analysis to determine the CTR criteria that each has the potential to exceed. Conduct such analyses for other identified dischargers. Identify constituents of concern.
- Research the known biologic and ecologic effects of the constituents of concern.
- Review the Basin Plan to identify the beneficial uses of concern in the Mad, Eel, and Russian river watersheds. Communicate with Regional Water Board staff, RGS, agreement permittees, and other local, state, and federal agencies to identify specific water intakes, recreation areas, habitat areas, or other areas of special concern in the Russian River watershed, as reasonable.
- Finalize draft of TSD outline for public distribution.
- Schedule, prepare reports, and observe Regional Water Board staff conduct public meeting to inform the public and to receive comments on the scope of the mixing zone work effort.

- Submit Progress Report to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.

### **Third Quarter commencing March 1, 2005, and ending May 31, 2005**

#### **Continued TSD Research and Development of Draft Mixing Zone Policy**

- Communicate with Regional Water Board staff and representatives from each discharger of concern to determine the state of their existing treatment and discharge facilities, maintenance efforts, future plans for upgrades or modifications, and source control efforts.
- Collect and/or request from agreement permittees and other dischargers, site-specific information regarding potential mixing zones at each facility of concern on the Russian River. Specifically, collect from Regional Water Board files, information provided by the agreement permittees, other dischargers, and other sources, and compile all available water quality and quantity data (at, or nearest the point of discharge) related to the CTR and SIP and/or mixing zone issues for the dischargers of concern.
- Assess each potential mixing zone applicant to determine if Section 5. Special Provisions in the SIP would apply. Include in this assessment a review of the procedures set forth by the State Water Board for the granting of case-by-case exceptions in accordance with the SIP in a memorandum prepared by Stan Martinson, Chief of the Division of Water Quality on February 4, 2004.
- Develop an approach for assessing site-specific objectives, Water Effects Ratio (WER), metals translators, hardness factors and additional means set forth in the SIP to assist in achieving compliance, when evaluating applications for mixing zones.
- Prepare preliminary internal draft mixing zone policy and related proposed amendments to the Basin Plan, including environmental documentation for CEQA compliance, and initiate contacts for peer review and economic analysis. Meet with interested Regional Water Board staff to receive their comments and suggestions - March 15.
- Prepare internal review draft of mixing zone policy and related proposed Basin Plan amendments. Distribute to interested Regional Water Board staff for review and comment - March 22.
- Prepare final draft Mixing Zone Policy package for final review and approval by Regional Water Board staff and appropriate State Water Board staff - May 15.
- Schedule, prepare reports, and observe Regional Water Board staff conduct meeting to inform the public on the status of TSD development and to receive public input.
- Submit Progress Report to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.

### **Fourth Quarter commencing June 1, 2005, and ending August 31, 2005**

#### **Continued TSD Research and Finalization of Proposed Basin Plan Amendment**

- Research hypothetical models of mixing zones that can be used to assess water quality/beneficial use impacts. Request available modeling information from agreement permittees. Identify the array of models and study plans for mixing zones appropriate to the Russian River.

- Research diffuser technology and review permit applications for mixing zone use to date.
- Review NPDES permits that have been prepared by other Regional Water Boards, other states, and EPA that include mixing zones and dilution credits.
- Review the efforts of other Regional Water Boards to utilize the watershed management approach to allow mixing zones.
- Schedule, prepare reports, and observe Regional Water Board staff conduct meeting to inform the public on the status of TSD development and to receive public input.
- Draft Mixing Zone Policy and related changes as a proposed Basin Plan Amendment and finalize environmental documentation.
- Draft all documents for public hearing, including staff report and Regional Water Board resolutions, for use by Regional Water Board staff.
- Draft NPDES permit criteria.
- Pending approval by Regional Water Board staff, release Notice of Public Hearing to consider adoption of Mixing Zone Policy and related changes as a Basin Plan Amendment and open public comment period on proposed policy - June 15.
- Develop informational report for Regional Water Board staff to update the general public and the Regional Water Board at its meeting on June 21, 2005.
- Provide assistance to Regional Water Board staff at the Public Hearing on the Mixing Zone Policy/Basin Plan Amendment scheduled for this day - August 9 and 10.
- Assist Regional Water Board staff in preparing necessary documents prior to and following public hearings, including responses to comments and conducting outreach activities.
- Submit Progress Reports to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.

**Fifth and Sixth Quarter commencing September 1, 2005 and ending February 28, 2006**

**Finalize the TSD**

- A preliminary Table of Contents for the TSD is described below.
  1. Introduction.
  2. Review of Federal and State regulations and guidance relevant to the development of mixing zones.
  3. Review of the common methods for assessing the size and effect of mixing zones:
    - a. Common models, their strengths and weaknesses;
    - b. Dye study design criteria;
    - c. Monitoring study design criteria;
    - d. Case studies involving the application of mixing zones with environmental relevance to the North Coast.
  4. Identification of North Coast watersheds where mixing zone applications are likely:
    - a. The spatial arrangement of discharges, intakes, and recreational areas within each watershed of concern;
    - b. Relevant hydrologic conditions;

- c. Relevant ecologic conditions, including presence of sensitive species and their habitat (including human recreation, zones of passage, etc.).
- 5. Assessment of the pollutants of likely concern in the Russian River:
  - a. Pollutants that the dischargers of concern are likely to discharge in excess of SIP objectives;
  - b. The fate and transport characteristics of these pollutants of concern.
- 6. Identification of discharger performance criteria potentially appropriate for the application of mixing zones:
  - a. Discharge characteristics and compliance record;
  - b. Pollution prevention efforts: source control and pretreatment;
  - c. Treatment system design and performance;
  - d. Diffuser design and performance;
  - e. Known discharger performance data gaps for those likely to apply for mixing zones.
- 7. Conclusions.
- Submit Progress Report to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.

**Seventh Quarter commencing March 1, 2006, and ending May 31, 2006**

- In close coordination with Regional Water Board staff, draft preliminary NPDES permit waste discharge specifications, prohibitions, and monitoring programs. Note that the upcoming round of NPDES permit updates may not provide for the use of mixing zones, but may instead be interim permits that would include provisions obligating dischargers to provide information to the Regional Water Board, according to time schedules, to justify the use of mixing zones.
- Submit Progress Report to RGS, agreement permittees, interested stakeholders, and Regional Water Board staff.

**Eighth Quarter commencing June 1, 2006, and ending August 31, 2006**

**Project Completion**

- Outline appropriate monitoring criteria for NPDES permit compliance monitoring and meet with appropriate Regional Water Board staff to review the work of RGS staff with respect to individual Russian River dischargers.
- Submit final Progress Report to RGS, interested stakeholders, and Regional Water Board staff.